

STATUS OF CLAIMS

Claims 1 - 38 are pending.

Claims 1 - 28 stand rejected.

Claim 11 has been amended without prejudice herein.

REMARKS

Applicant respectfully requests reconsideration of the subject application.

Objections to the Claims

Claim 11 stands objected to as depending upon itself. Applicant has amended Claim 11 to depend from Claim 1. Claim 1 has also been amended to recite "areas" instead of "pads". Applicant apologizes for any inconvenience caused by these errors. Reconsideration and removal of these objections is thus requested.

35 U.S.C. 102 and 103 Rejections

Claims 1, 2, 6-8, 10, 12, 15, 17-23, 25, 28, 29, 31, 34 and 36-38 stand rejected under 35 U.S.C. 102(b) as being anticipated by Troxell '478 (United States Patent 5,541,478). Claims 16 and 30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Troxell '478. Claims 1, 2, 6-8, 10, 12, 15, 17-23, 25, 28, 29, 31, 34 and 36-38 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Troxell '478 in view of Troxell '406 (United States Patent 5,177,406). Claims 1-9, 11, 13, 14, 17-29, 32-35 and 38 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Oh (United States Patent Publication 2004/0222734) in view of

Troxell '406. Applicant traverses these rejections, and requests their reconsideration and removal for at least the following reasons.

1. Troxell '478 Fails To Anticipate Claim 1

35 U.S.C. 102(b) recites:

A person shall be entitled to a patent unless - (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States

Consistently, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." See, M.P.E.P. §2131 citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Troxell '478 fails to teach each of the limitations of Claim 1, and hence, as a matter of law, fails to anticipate Claim 1.

For example, Claim 1 recites, in part, "a TFT circuit operable to apply a predetermined voltage to an associated area, said TFT circuit, comprising: first and second electrically cascaded transistors; and a capacitor electrically connected between an output of said first transistor and an output of said second transistor." Applicant submits Troxell '478 fails to teach such a TFT circuit.

First, Applicant notes Troxell '478 is itself silent with regard to a transistor circuit configuration. Instead, it merely proposes that "the circuit construction of the pixel-driving transistors may be that shown in U.S. Pat. No. 5,151,632 (Troxell '632)." *See, col. 9, lines 32-39.*

Troxell '632 fails, however, to teach the recited TFT circuit of Claim 1. For

example, Troxell '632 purports to teach a matrix addressable vacuum fluorescent display that has redundant circuitry comprising a row electrode and two sets of column electrodes for each row and column of pixels, respectively, and two sets of FETs separately coupled to row and column electrodes to turn on the phosphor element for a given pixel, each set of FETs supplying part of the phosphor energizing current. See, *Abstract*. Troxell '632 proposes that if one column electrode or one set of transistors is defective the remaining set is effective to illuminate the phosphor at least to some suitable intensity. See, *Abstract*. Thus, Troxell merely teaches, at most, redundant sets of FETs.

This is confirmed by reviewing Fig. 3 of Troxell '632. Therein are shown two active cells 12 in adjacent rows of the same column of a display and addressed by row electrodes 14 and column electrodes 18L and 18R. Each phosphor element is controlled by two switches 28L and 28R, each comprising a set of two MOS FETs. FET 44L is a select transistor which has a source connected to column electrode 18L and its gate connected to the row electrode 14. The drain of FET 44L is connected to the gate of the drive transistor 46L which has its drain and source connected between the phosphor element 22 and the ground line 20. The other switch 28R is configured the same as switch 28L and comprises select FET 44R controlled by row electrode 14 and column electrode 18R, and drive FET 46R which has its source and drain in parallel with that of FET 46L. See, *col. 3, lines 8-37*.

Accordingly, Troxell '478, even if supplemented with the Troxell '632 circuit construction of the pixel-driving transistors, fails to teach a TFT circuit comprising first and second cascaded transistors, no less the recited TFT circuit of Claim 1, which calls

for “first and second electrically cascaded transistors; and a capacitor electrically connected between an output of said first transistor and an output of said second transistor.” Accordingly, Troxell ‘478 fails to teach each recited limitation of Claim 1, and hence, as a matter of law, fails to anticipate the same.

Thus, Applicant respectfully requests reconsideration and removal of this rejection of Claim 1. Applicant also requests reconsideration and removal of the rejections of Claims 2, 6-8, 10, 12, 15, 16 and 17-22 as being anticipated or unpatentably obvious over Troxell ‘478 as well, at least by virtue of these claims’ ultimate dependency upon a patentably distinct base Claim 1.

2. *Troxell ‘478 Fails To Anticipate Claim 23*

Like Claim 1, amended Claim 23 recites, in part, “a TFT circuit operable to apply a predetermined voltage to an associated area, said TFT circuit, comprising: first and second electrically cascaded transistors; and a capacitor electrically connected between an output of said first transistor and an output of said second transistor.” Accordingly, Applicant respectfully requests reconsideration and removal of this rejection for at least analogous reasons.

Further, Claim 23 recites, in part, “a plurality of spaces electrically isolating said anode, first grid and cold cathode, wherein a vacuum is within said space.” Troxell ‘478 fails to teach such an embodiment. Rather, grid 74 of Troxell ‘478 is in contact with the phosphor supporting anode (*see, e.g., Figs. 8 and 9*), such that there is no isolating vacuum between the grid and anode.

Accordingly, Applicant respectfully requests reconsideration and removal of this rejection of Claim 23. Applicant also requests reconsideration and removal of the

rejections of Claims 25, 28, 29, 30, 31, 34 and 36 as being anticipated or unpatentably obvious over Troxell '478 as well, at least by virtue of these claims' ultimate dependency upon a patentably distinct base Claim 1.

3. *Troxell '478 Fails To Anticipate Claim 38*

Analogously to Claim 1, Claim 38 recites, in part, "a TFT circuit for each pixel, said circuit employing first and second active devices in cascade and each coupled between an associated row (N) and column (M) to define a pixel at said location M and N and when activated operative to attract said emitted electrons to said pixel location." Again, Troxell '478, even if supplemented with the Troxell '632 circuit construction of the pixel-driving transistors, fails to teach a TFT circuit comprising first and second cascaded transistors.

Accordingly, Applicant respectfully requests reconsideration and removal of this rejection of Claim 38.

4. *Troxell '478 in view of Troxell '406 Fails To Obviate Claim 1*

To establish a prima facie case of obviousness, all of the recited claim limitations must be taught or suggested in the prior art. See, *M.P.E.P.* 706.02(j). Applicant submits the cited art fails to teach, or suggest, each of the limitations of any of the pending claims.

Turning first to amended Claim 1, in part, "first and second electrically cascaded transistors; and a capacitor electrically connected between an output of said first transistor and an output of said second transistor, wherein the capacitor and output of the second transistor are electrically coupled to the associated conductive area." Such a configuration is shown in Fig. 3 of the subject application, where output electrode 189

of transistor 186 and capacitor 190 are electrically coupled to conductive pad 170.

Troxell '478, even if supplemented with the Troxell '632 circuit construction of the pixel-driving transistors, fails to teach a TFT circuit comprising first and second cascaded transistors – no less that the capacitor and output of the second transistor are electrically coupled to an associated conductive area. Troxell '406 fails to remedy this shortcoming of Troxell '478.

Instead, Fig. 3 of Troxell '406 teaches the drain electrode of a second select transistor 31 is in electrical contact with the gate electrode of the driver transistor 34, which in turn furnishes an electrically conductive path to the capacitor 32. The source electrode of the driver transistor 34 is in electrical contact with the phosphor 16 and its drain electrode is in electrical contact with ground 20. And, the capacitor 32 is also in electrical contact with ground 20. *See, e.g., col. 6, lines 29-44.*

Accordingly, as Troxell '478 fails to teach, or suggest, a TFT circuit comprising first and second cascaded transistors at all, and Troxell '406 fails to teach, or suggest that the capacitor and output of the second transistor are electrically coupled to an associated conductive area, Applicant submits their combination necessarily fails to teach or suggest “first and second electrically cascaded transistors; and a capacitor electrically connected between an output of said first transistor and an output of said second transistor, wherein the capacitor and output of the second transistor are electrically coupled to the associated conductive area” – as is recited by Claim 1.

Accordingly, Applicant respectfully requests reconsideration and removal of this rejection of Claim 1. Applicant also requests reconsideration and removal of the rejections of Claims 2-9, 11, 13, 14 and 17-22 as being unpatentable over Troxell '478

in view of Troxell '406, at least by virtue of these claims' ultimate dependency upon a patentably distinct base Claim 1.

5. *Troxell '478 in view of Troxell '406 Fails To Obviate Claim 23*

Analogously to Claim 1, Claim 23 recites, in part, "a TFT circuit operable to apply a predetermined voltage to an associated area, said TFT circuit, comprising: first and second electrically cascaded transistors; and a capacitor electrically connected between an output of said first transistor and an output of said second transistor, wherein the capacitor and output of the second transistor are electrically coupled to the associated conductive area."

Again, as Troxell '478 fails to teach, or suggest, a TFT circuit comprising first and second cascaded transistors at all, and Troxell '406 fails to teach, or suggest that the capacitor and output of the second transistor are electrically coupled to an associated conductive area, Applicant submits their combination necessarily fails to teach or suggest first and second electrically cascaded transistors; and a capacitor electrically connected between an output of said first transistor and an output of said second transistor, wherein the capacitor and output of the second transistor are electrically coupled to the associated conductive area – as is recited by Claim 23.

Accordingly, Applicant respectfully requests reconsideration and removal of this rejection of Claim 23. Applicant also requests reconsideration and removal of the rejections of Claims 25, 28, 29, 31, 34 and 36-37 as being unpatentable over Troxell '478 in view of Troxell '406, at least by virtue of these claims' ultimate dependency upon a patentably distinct base Claim 23.

6. *Troxell '478 in view of Troxell '406 Fails To Obviate Claim 38*

Claim 38 analogously recites, in part, "wherein each said TFT circuit comprises: first and second electrically cascaded transistors; and a capacitor electrically connected between an output of said first transistor and an output of said second transistor, and the capacitor and output of the second transistor are electrically coupled to the associated pixel."

Again, Troxell '478 and Troxell '406 fail, in any combination, to teach, or suggest, first and second electrically cascaded transistors; and a capacitor electrically connected between an output of said first transistor and an output of said second transistor, wherein the capacitor and output of the second transistor are electrically coupled to the associated conductive area – as is recited by Claim 38. Accordingly, Applicant respectfully requests reconsideration and removal of this rejection of Claim 38.

7. *Oh in view of Troxell '406 Fails To Obviate any of Claims 1, 23 or 31*

The Office action acknowledges Oh fails to teach an anode including any TFT -- no less the recited TFT of Claim 1 that includes first and second electrically cascaded transistors; and a capacitor electrically connected between an output of said first transistor and an output of said second transistor, wherein the capacitor and output of the second transistor are electrically coupled to the associated conductive area. To remedy this admitted shortcoming of Oh, the Office action attempts to import select teachings of Troxell '406.

Again, however, Troxell '406 instead teaches the drain electrode of a second select transistor 31 is in electrical contact with the gate electrode of the driver transistor 34, which in turn furnishes an electrically conductive path to the capacitor 32. The

source electrode of the driver transistor 34 is in electrical contact with the phosphor 16 and its drain electrode is in electrical contact with ground 20. And, the capacitor 32 is also in electrical contact with ground 20. *See, e.g., col. 6, lines 29-44.*

Accordingly, Applicant submits Oh and Troxell fail, in any combination, to teach, or suggest, an anode having a TFT that includes first and second electrically cascaded transistors; and a capacitor electrically connected between an output of said first transistor and an output of said second transistor, wherein the capacitor and output of the second transistor are electrically coupled to the associated conductive area – such as is recited by Claims 1, 23, and 31.

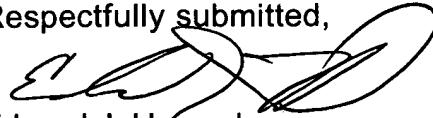
Thus, Applicant requests reconsideration and removal of the rejections of Claims 1, 23 and 38 as being unpatentably obvious over Oh in view of Troxell '406. Applicant also requests reconsideration and removal 2-9, 11, 13, 14, 17-22, 24-29 and 32-35, at least by virtue of these claims' ultimate dependency upon a patentably distinct base Claim 1.

CONCLUSION

In view of the foregoing, Applicant believes he has addressed all outstanding grounds raised by the Examiner and respectfully submits the present case is in condition for allowance, early notification of which is earnestly solicited.

Should there be any questions or outstanding matters, the Examiner is cordially invited and requested to contact Applicant's undersigned attorney at his number listed below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Edward J. Howard', written over a horizontal line.

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